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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 04/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/832,794

Applicant(s)

FUJIHIRA, TORU

Examiner

Jessica L. Rossi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-6 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .                      6) ☐ Other: .

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## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-6, drawn to a method for producing a composite structure, classified in class 156, subclass 292.
  - II. Claim 7, drawn to a composite structure, classified in class 244, subclass 125.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the composite structure can be made by another and materially different process where the curved portion and cylindrical portion are formed separately (see Admitted Prior Art disclosed in the present invention at p. 1-2).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A (appears to be claim 2), drawn to disposing an elastic plate and a press plate on a fin portion where the skins overlap.

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Species B (appears to be claim 3), drawn to a fin portion having a width of 500 mm or more; it being noted that p. 3, 2<sup>nd</sup> paragraph of the present specification discloses such a width eliminating the need for the elastic and press plates.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. During a telephone conversation with Mr. Olexy on 1/14/03 a provisional election was made without traverse to prosecute the invention of Group I and Species A, claims 1-2 and 4-6.

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Affirmation of this election must be made by applicant in replying to this Office action. Claims 3 and 6-7 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, it is unclear as to how this further limits claim 1. If Applicants intended this to be a method of use claim, please note that the present language is improper. Furthermore, if Applicants did intend a method of use claim such would be restrictable from the method and product claims. Applicants are asked to clarify.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (WO 99/39976) in view of Forster et al. (US 5580502; provided in IDS).

With respect to claims 1 and 6, Dean teaches a method for producing a composite panel 18/62 that may be used as an aircraft panel (Figures 12 and 27; p. 5, line 22). Dean teaches the

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panel 18/62 having a 3-D curved portion and a cylindrical portion (Figure 27). The method comprises placing an outer/base skin 41 made of a composite prepreg on a forming die/tool face (p. 17, lines 20-21; p. 18, lines 23-24; p. 16, lines 15-17), mounting a honeycomb core 50 on a portion of the outer skin that forms the 3-D curved portion (Figures 12 and 27; p. 17, lines 23-24; p. 19, lines 19-20), superimposing an inner skin (not shown in Figures) made of a composite prepreg onto the honeycomb core and outer skin (p. 17, lines 24-29), arranging preformed stiffener members 42-45 (Figure 12) or 42, 54 (Figure 27; note these stiffeners intersect at junctions 58) each made of a composite prepreg on a portion of the inner skin that forms the cylindrical portion to prepare an assembly (Figures 12 and 27; p. 17, lines 34-35; p. 19, lines 10-11 and 14-17; p. 21, lines 3 and 7 and 11-13), and forming the assembly by curing (p. 17, lines 17-18; p. 19, lines 32-34). The reference is silent as to the stiffeners being frames and stringers and curing by heat and pressure.

One skilled in the art would have readily appreciated that “stiffeners” is a notoriously well-known and conventional term in the art that encompasses such things as stringers, ribs, spars, and frame members; all of which are used to strengthen a composite panel in the aircraft industry. Therefore, selection of particular “stiffeners” would have been within purview of the skilled artisan at the time the invention was made depending on the final use of the panel; it being noted that the stiffeners of Dean intersect (Figure 27) just as those of the present invention.

It is known in the art to make a composite panel for an aircraft by simultaneously curing an assembly comprising inner and outer composite prepreg skins having a honeycomb core between them and a composite prepreg stiffener member arranged on the inner skin using heat and pressure, as taught by Forster (Figure 4; column 3, lines 45-46; column 4, lines 10-11;

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column 5, lines 3-7 and 10-13; column 8, lines 3-15 and 22-29 and 40-45; column 9, lines 50-51; column 10, lines 2-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the assembly of Dean using heat and pressure because such is known in the art, as taught by Forster, and this results in formation of a well bonded and consolidated panel.

Regarding claim 4, selection of a particular pressure would have been within purview of the skilled artisan at the time the invention was made depending on the materials used.

Regarding claim 5, Dean teaches the stiffeners 42 being arranged at linear intervals on a portion of the inner skin that forms the cylindrical portion, the stiffeners 54 passing through the intervals and intersecting the stiffeners 42, and curing the assembly while using forming jigs/tools engageable with the skin and stiffeners (Figures 9 and 27; p. 16, lines 15-17; p. 19, lines 32-34; p. 22, lines 11-13). Selection of the particular types of jigs/tools would have been within purview of the skilled artisan at the time the invention was made depending on the desired molding effect.

10. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. in view of Forster et al. and Wilden et al. (US 5242523; provided in IDS).

With respect to claims 1 and 6, it is noted the examiner interpreted the "stiffeners" of Dean to encompass frames and stringers, which are well-known and conventional in the art as set forth in the 103 rejection above. If it is not taken as such, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use composite prepreg frames and stringers for the stiffeners of Dean because such are known in the art for reinforcing a composite aircraft panel, as taught by Wilden (Figure 3; column 1, lines 21-22 and 52-55; column 4, lines

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49-51 and 61-65; column 7, lines 30-33; column 10, lines 1-5), where only the expected results would have been achieved.

Regarding claim 5, it is noted the examiner stated that selection of a particular type of jig/tool would have been within purview of the skilled artisan as set forth in the 103 rejection above. If it is not taken as such, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a combination of flexible and rigid jigs/tools because such is known in the art, as taught by Wilden (note rigid pressure bridges and flexible cauls; column 4, lines 60-66; column 6, lines 31-32; column 2, lines 58-59), where this allows for varying pressure application during the curing cycle.

***Allowable Subject Matter***

11. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, the prior art fails to teach or suggest disposing an elastic plate and press plate on a fin portion where the outer skin and inner skin overlap each other during heating and pressing.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the



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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi  
Patent Examiner  
Art Unit 1733



jlr  
April 4, 2003



Michael W. Ball  
Supervisory Patent Examiner  
Technology Center 1700